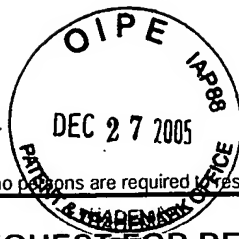


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PTO/SB/33 (07-05)

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## PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

WSTD L-081A / K35A1309

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on 12/21/2005

Signature

Typed or printed name

Kimberly Carlsen

Application Number

10/609,062

Filed

06/27/2003

First Named Inventor

Sridharan Venk

Art Unit

2652

Examiner

Tianjie Chen

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐

applicant/inventor.

☐

assignee of record of the entire interest.

See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)☒

attorney or agent of record.

Registration number 40,196☐

attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

Signature

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Typed or printed name

(949) 855-1246

Telephone number

12/21/2005

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☐\*Total of 1 forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Attorney Docket: WSTD L-081A / K35A1309  
Application No.: 10/609,062  
Response to Office Action of 08/24/2005



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant:	Venk Sridharan	)	Confirmation No.	6852
		)		
Serial No.:	10/609,062	)	Art Unit:	2652
		)		
Filed:	06/27/2003	)	Examiner:	Tianjie Chen
		)		
For:	FLEX CIRCUIT ASSEMBLY	)		
	WITH AN INTEGRAED	)		
	CIRCUIT DEVICE	)		
	ATTACHED TO A BASE	)		
	FILM WITH AN UNDERFILL	)		
	PORTION AND SEALED	)		
	WITH A GLOB TOP PORTION	)		

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In response to the final Office Action of August 24, 2005 in the above-identified Application please consider this Pre-Appeal Brief Request for Review as follows:

This Pre-Appeal Brief Request for Review is made under the pilot program pursuant to the notice issued by the PTO in the OG Notices of July 12, 2005.

In the Office Action the Examiner rejected Claims 1-21 under U.S.C. Section 103(a) as being unpatentable over Applicant's admitted prior art (AAPA) in view of U.S. Patent Number 6,455,354 to Jiang and U.S. Patent Number 5,733,800 to Moden.

1. **None of the Cited Art References Teach Use of Different Materials for the Top and Underfill and Glob Top Materials as Required by the Claims**

In the Office Action, the Examiner characterizes the AAPA as teaching a "*glob top portion (cover portion) disposed upon the underfill portion and the flex circuit base film for sealing the electrically conductive trace.*" (Office Action, page 2) Applicant submits that this is an erroneous characterization of the AAPA.

The Specification in the "Description of Prior Art" section contemplates that an integrated circuit device that includes a die with solder bumps may be electrically connected to traces disposed upon a polyimide base film. Underfill material, which is relatively expensive, is used to attach an integrated circuit device to a base film. In a follow-up touch up process, the same underfill material is used to cover those traces that are exposed between the integrated circuit device and a surrounding opening of a polyimide cover film. (page 2, para. 6 – page 3, para. 7) Thus, there is no discussion of any "glob top" material used in this context of a die with solder bump connections, and cannot be characterized as admitting as much.

The Office Action continues to reason that the AAPA does not specify the material for the glob top portion and the underfill portion. (Office Action, first sentence, page 3) Thus, indirectly, the Office Action contends that the "glob top portion" and the "underfill

portion" may be of different materials. This is clearly an erroneous characterization of the AAPA which discussed use of the same material. Accordingly, the AAPA cannot be used for the proposition that different materials may be used for a "underfill portion" and a "glob top portion" as required by the claims. As such, the Office Action fails to establish a prima facie case of obviousness.

**2. The Cited Art References Teach Away From the Suggested Combination**

Applicant contends that the Office Action fails to establish a prima facie case of obviousness as there would be no motivation to combine the cited art references as suggested. This is because such references teach away from such combination as the objects or purpose of the inventions of the cited art references would be frustrated by the suggested combination. This argument is set forth in the Response to Office Action at pages 2-4.

In summary, the object of the Jiang invention would be frustrated if combined with the AAPA as suggested in the Office Action because the AAPA utilizes an integrated circuit device with a solder bump connection (not a TAB connection or bond wires and their associated problems to be specifically solved by the Jiang invention). As such, the Jiang reference teaches away from the suggested combination with the AAPA.

A similar teaching away occurs with the suggested combination of the devices of the AAPA and the Moden reference. The Moden reference pertains to an underfill material for a LOC ("leads over chip") type of semiconductor die assemblies. One of the shortcomings of the prior art LOC semiconductor die assemblies is that the tape used to bond the lead fingers of the lead frame does not adequately lock the lead fingers in position for the wire bonding process. (col. 1, lines 48-54) The object of the Moden invention to address this problem would be frustrated if combined with the AAPA as suggested in the Office Action because

the AAPA utilizes an integrated circuit device with a solder bump connection (not leads formed from a lead frame and the associated bond wire / tape problems to be specifically solved by the Moden invention).

**3. The Response to Applicant's Arguments is Erroneous**

In response to Applicant's arguments, the Office Action contends that "*Glob top portion is made after the electrical connection has been done. The material for the glob top has nothing to do the way of making the electric connection.*" (Office Action, page 4)

This is simply not the case because the nature of the electrical connection is significant. This is because the glob top material is used to be "globbed" about the bond wires as taught in the Jiang reference. However, the Jiang reference does not teach or suggest use of a glob top material in the context of an integrated circuit device that includes a solder bump connection and disposing such integrated circuit device adjacent a flex circuit base film as required by the claims. Such recited solder bump connection is a fundamentally different application than the wire bonding or tape automated bonding (TAB) that is disclosed by the Jiang reference. Therefore, the Jiang reference fails to teach or suggest the recited glob top material in the context of "solder bump connection" as required to establish a prima facie case of obviousness.

In further response to Applicant's arguments the Office Action contends that "*Glob top is just used to solve the problem wire sweep and detachment.*" (Office Action, page 4) However, this only confirms Applicant's contention that the cited prior art does not teach or suggest use of a glob top material in the context of solder bump connection as required by the claims as the problems of wire sweep is associated with wire bonded packages and

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connection detachment occurs in either TAB connection or bond wires. (Jiang reference, col. 2, lines 51-60)

Finally, in further response to Applicant's arguments the Office Action contends that *"With regard to reference of Moden: the material is supposed to be used for various chips. No reason has been seen that the Moden's material cannot be used in the AAPA's device."*

The Moden reference pertains to an underfill material for a LOC ("leads over chip") type of semiconductor die assemblies. It is the Examiner's burden and not the Applicant's, however, to show that the references teach or suggest the claimed subject matter. No teaching or suggestion has been shown that the underfill material of Moden could be utilized in the context of the required solder bump connections. The reasoning of the Examiner is the exact "hindsight" type of reasoning that the Federal Circuit has sought to avoid.

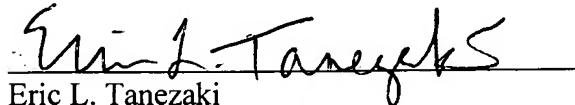
Should any additional fees be due please charge Deposit Account No. 19-4330.

Respectfully submitted,

STETINA BRUNDA GARRED & BRUCKER

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